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REMEDIAL PROJECT MANAGERS' MEETING

NASA/JET PROPULSION LABORATORY

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16 JANUARY 1997

ATTENDEES:

Jon Bishop, RWQCB-LA

Charles L. Buril, JPL

Mark Cutler, Foster Wheeler

Richard Gebert, DTSC

Debbie Lowe, U.S. EPA

Dan Melchior, Foster Wheeler

Stephen Niou, URS

Judith A. Novelly, JPL

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Reported by: Louise K. Mizota, CSR 2818

PASADENA, CALIFORNIA

16 JANUARY 1997

9:38 A.M.

BURIL: Welcome, everybody. Does everybody have a copy of the agenda? I'll pass the other stuff out as we go along just to save you from having a stack of stuff in front of you.

Do you have one? Here. Here is one for you.

LOWE: Thanks.

BURIL: Sorry we didn't get that out to you all earlier, but I think that's pretty much what we had talked about at our last telecon, and also added a couple things on there because we've got some results from the groundwater monitoring we want to share with you. A couple of things that came out of this conjunctive use project that we mentioned last time I want to bring to your attention and let you know what's happening on that.

Let me start by saying I think that we should probably go ahead and look at number 1 first, because there are some changes to the schedule that I've done, some which Debbie pointed out last time for the 30 days, 60 days requirements under the FFA.

LOWE: Yes.

BURIL: We've also run into a couple of problems that are going to delay work start a little bit that I want to tell you about. I'll show you those here. I have a summary schedule. It's not 34 pages long anymore.

LOWE: Thank you.

BURIL: It's a summary. It's still four pages long. But it's a summary going out to the year 2000.

Then I'd like to jump to number 4. The reason for that is that we have groundwater results which I think will help us decide about an interim ROD, which is under number 2, and may help flavor the discussion on that a little bit.

Then the last two things, the partnering meeting and the conjunctive use we can talk about.

I had tried to put together an agenda for us to look at for the partnering meeting, but in doing this I realized that there may be a number of ways to deal with this. So if we have time, I would suggest that we basically work it in real time here today, actually lay the agenda out so we're all in agreement, and then we can work it from there. I have some ideas we can use as a straw man and beat

that up and go from there.

Then the conjunctive use basically is to let you know some of the contacts we've had and go on from there.

So let me pass out the schedule first and let you have a look at that. This one is not in color. Our color printer decided to give out on us.

BISHOP: Well, I'm out of here.

BURIL: Go ahead and send that around.

Does everyone have one of these now? Okay.

Now, again, the only changes that I've made, I'll point them out to you so you'll know. First was in the review times and they aren't shown on here now. They only are showing milestones and length of time for major tasks. But in the review periods, we've gone through and made sure that they conform to the FFA requirements of 30 days or 60 days, depending upon the document. So that hardly altered anything at all. In fact, most of them were shortened by about a day or two because if you have weekends or three-day weekends or that kind of thing in there, we weren't counting those. But they do count now.

Secondly, it's not shown in here, but

what's happened is we've run into some procurement snags through the subcontractor contract development. First of all, we've got a problem with terms and conditions with some of the contracts that have cropped up, and so we've got a delay anticipated as a result of that.

Also, in our procurement efforts with Foster Wheeler, they were nearly complete and ran into some slowdowns here at JPL. The slowdowns, quite honestly, were as a result of some of our spacecraft projects that stepped up to the bat and said "Hey, us first," and that's the way it is. Well, that's our primary mission here, is to build spacecraft. The one that jumped in front was Mars Pathfinder. That's an exceptionally important project to JPL and NASA. So the procurement folks turned their attention to that, and they're going to be getting back to us here within the next week. But they have been focused on Pathfinder now for about almost four weeks, which has created a delay in the procurement cycle.

So what you'll see here is that you'll see that the subcontractor contract development and implementation for OUs-1 and 2, that those have been extended by about two weeks in OU-2 and by four

weeks in OU-1.

Now, basically, it comes down to we can't start work until after these contracts and everything are in place. So the Operable Unit 2 work, which would have started on February 18th, I think it was, has now been pushed back. That's going to be March 4th. And the OU-1 work, which was also February 14th, is now pushed back to March, I think it's 17th.

So again, approximately two weeks and approximately four weeks for OU-s 2 and 1, respectively. Everything else is virtually identical.

Any comment?

GEBERT: Is the rest of the schedule going to be pushed back?

BURIL: Virtually everything else is pushed back by that time frame, right, since we can't start work until after that. Those were, unfortunately, critical path items that we couldn't work around. Procurement tends to throw monkey wrenches in schedules, it seems.

So any comments, concerns, questions on that? Certainly it's something that you've seen before, with the exception of those two changes.

Like I say, virtually everything else is the same.

We have the milestone dates. As you look through them, what I did is I just printed out the first columns and the major tasks here. So as you look through this, you'll see what we're talking about. For example, on line 44 on the first page, "Prepare the draft OU-2 RI report." And we show that submit the report would be done May 1st of '98, which is about two weeks back of what it was originally.

So this just basically highlights all the milestones.

BISHOP: You were talking about line 44?

BURIL: On the first page. "Prepare draft OU-2 RI report (risk assessment)."

BISHOP: It says August, not May.

BURIL: Which one are you -- oh, I'm sorry. Look at -- I'm sorry. I'm pointing at the wrong one. That's the major task. The subtask under that, "Submit draft RI report for concurrent agency review" is May 1st.

BISHOP: Oh, okay.

BURIL: So that's our current schedule, and literally up to the minute. We finished modifying this thing yesterday afternoon and this morning

based on conversations with the procurement division here at JPL.

Well, if we don't have any questions on that at this point, we can come back to it if you think of anything along the way, and deal with that.

(Discussion held outside the record.)

BURIL: Let me hand out, then, number 4. I'm going to skip around in the agenda. I think it will be more effective for us to look at the data that we have available.

What I have here are some maps which indicate various concentrations and groundwater contours. This comes from our August-September groundwater monitoring results report, which is probably by this time sitting on all of your desks at your office waiting to be opened. It was sent out yesterday. So we'll pass that around.

This is for the organics that we have a concern with as well as metals and identifies it for both August and September.

And we also have the draft report in our house that's currently under review. We just received that. But I wanted to share the same maps with you for November and December so you can see what's happening in terms of the groundwater quality

here at JPL, as that may have an impact on how we ultimately decide how we're going to approach Operable Unit 3.

These are October-November. This is September --

GEBERT: Are there two different --

BURIL: There are two different ones.

GEBERT: Oh, I'm sorry. I didn't realize.

BURIL: There are two different ones. You should have two sets, the first one going August-September, and the second one October-November. And contained within those are numbers regarding concentrations, the various constituents, and also groundwater contours.

What I'll point out to you is a couple of things. First of all, we have MW --

ROBLES: August? Which one?

BURIL: I'm looking at August. I'll go chronologically. I'm looking at the very first one, Figure 3-1, carbon tetrachloride.

And Mark or Dan or B.G., if you folks want to point something out that I don't point out, please feel free to step up to the plate and let us know.

The most interesting thing that I saw at

the outset of this is that we're now picking up some constituents out in Operable Unit 3, particularly in Well 17 and Well 18.

We also show some very small hits at MW-10 for carbon tetrachloride in Figure 3-1.

CUTLER: I just want to point out that on this October-November event there's about five upper screens in Well 16. It says "not sampled." Water levels dropped to the lowest levels we've ever seen out here, and those screens were dry.

ROBLES: That's October. But we're still on August.

BURIL: We're still on August.

CUTLER: I'm sorry.

BURIL: We'll get to that here in a second.

Then on Figure 3-2 for August-September for trich, we can see that concentrations in MW-10 are similar to what we're seeing in MW-21, and that we're also seeing trich out in Wells 17 and 18, which we had not seen before.

BISHOP: It also seems like it's similar to MW-4, also.

BURIL: That's correct.

ROBLES: Which one?

BURIL: MW-4, right here.

LOWE: So MW-17 has been nondetect to date?

BURIL: Up to these sampling events, yes.

Is that a correct statement, Mark?

CUTLER: I think we've have only seen it out there.

BURIL: But it had been a small quantity, if I recall correctly.

CUTLER: Right. I can tell you.

BURIL: We'll doublecheck that just to be safe. These are higher concentrations than I recall seeing.

Then looking at Figure 3-3, 1,2-dichloroethane, we've got a little bit showing up here and there. Actually only one well, MW-4, with anything significant.

Again now, let me point out that these are concentrations that are above the MCL. Anything that is below MCL is not presented on these maps.

ROBLES: But that doesn't mean it wasn't there.

BURIL: That doesn't mean it wasn't there, but we're only showing ones that ring a bell that we understand. So we've got MW-4 and we have MW-13 and MW-7, and MW-16 as well.

So 7, 16 and 13 is not surprising, because that's the quadrilateral, again, that we've had the

highest concentrations in. MW-4 is fairly small concentrations, and probably not entirely surprising to see something there. And the rest of the wells appear to be clean.

BISHOP: They are below MCL.

BURIL: Below MCL. Correct.

BISHOP: That information may be useful in linking things at times.

BURIL: That's right.

CUTLER: But keep in mind for the carbon tet and the 1,2-DCA --

BISHOP: It's very low.

CUTLER: -- the MCL and the detection are the same.

BISHOP: Right.

CUTLER: It's only for the TCE map there might be some detects below 5 that aren't on the map. But these other two -- every detect is on here.

BURIL: Then on Figure 3-4 we present the metals analyses.

Mark, correct me if I'm wrong. These are the metal analyses, basically, what we found. There was no indication of an MCL association with this at all. Correct?

CUTLER: These are the detects.

BURIL: These are the detects that we found. Right. So this is everything.

ROBLES: There are no MCLs associated with any of these?

BURIL: There is a --

GEBERT: I think there is an MCL --

BURIL: For chromium and lead.

GEBERT: Lead and chromium have MCLs.

ROBLES: These are below it?

BURIL: Can anybody recall? What is that?

GEBERT: I think lead is 5.

BURIL: 5 parts per million, if I remember correctly.

GEBERT: Right.

BURIL: And chrome is what?

GEBERT: Total chrome?

BURIL: Is 50 parts per billion? Is that what it is?

GEBERT: Yes.

BURIL: Is that what it is?

NIOU: California, 50. EPA, federal is well under.

BISHOP: For total chrome. Isn't there one for hex chrome also?

BURIL: No. They don't establish one for hex

chrome.

CUTLER: There's no MCL.

ROBLES: So we're saying there's no MCL levels.

CUTLER: For hex chrome.

ROBLES: No. Any of these are above MCL levels.

CUTLER: No. These are all the detects.

BURIL: These are all the detects, but nothing above MCL. Is that a true statement, Mark?

CUTLER: No.

BURIL: Which one is above MCL?

CUTLER: I'd have to look at the tables and go through this. They weren't highlighted. This is just a map of all the metals detects.

BURIL: If 50 parts per billion is the total chrome, we're getting close at MW-13. And we're getting close at -- where is it? I saw it on here.

But off site we've got very low concentrations of everything, basically. Arsenic is one that we saw at Well 3 in the past. In fact, we've seen arsenic every time there, haven't we?

CUTLER: The bottom screen of Well 3, that's about the only place and it's always been there since 1990. It's a historical --

BURIL: It's in no other location, though, that would be that deep. We've got one hit up here on

arsenic I think I see here in Well 11, bottom screen.

CUTLER: The bottom screen. Right.

BURIL: Are those two screened, Mark, in approximately the same depth?

CUTLER: Pretty close. I could tell you exactly if you'd like. But --

BURIL: I think that's --

CUTLER: Close enough.

BURIL: If they're close, then this may be an indication of a naturally occurring situation since we don't see it anywhere else, and it's awfully deep.

LOWE: Was there no hex chrome detected at MW-4?

CUTLER: Pardon me? I'm sorry.

LOWE: Was there no hex chrome detected at MW-4?

CUTLER: Correct. Hex chrome was only in three wells, 7, 13 and 10.

LOWE: Do you have any thoughts as to why, from MW-13 and MW-10 and the duplicate at MW-7, it seems like all of the chrome is hex chrome, but then at MW-4 you have chromium, no hex chrome, and at the first sampling in MW-7 it's like half of it is hex chrome. Do you have any initial thoughts on that?

CUTLER: No, but we've noticed that. We talked

about before, I believe, that the dissolved chrome is hex chrome. If you detect it, it will be hex chrome. That seems to be what we're seeing here.

BURIL: But the absence of it being hex chrome in Well 4.

Mark, was there a turbidity problem in those screens at Well 4 that may account for that?

CUTLER: No. The only turbidity problem was in the upper screen of Well 12 and that's because the water level was right -- we had like two feet of water to try to sample. We just couldn't turn it up.

BISHOP: Is this historically the same? I can't remember what we've seen at MW-4 before. Have we seen just total and not hex?

CUTLER: I'm more familiar with the vols. I can tell you in a second.

BISHOP: Make you look through your tables. You should know these things off the top of your head, Mark.

CUTLER: No. Actually, total chrome was detected once in November and not in the previous, it looks like six events. So total chrome is fairly new in that well, that screen. That's kind of the general trend for Well 4, even the VOCs. They

didn't really start showing up until three or four weeks ago. The first three or four years there was nothing.

BURIL: Depending on how you interpret these, there may be some explanation of this. As you turn the page and look at Figure 5-1, you can see we've got a pretty significant groundwater depression here created by the public water supply wells. So there may be an influence generated by that that may be moving water in different directions. That coupled with our historic low that we're apparently experiencing in the aquifer.

BISHOP: That ought to be coming up now.

BURIL: Hopefully.

BISHOP: How much rain did you get to date?

BURIL: I haven't checked the rain gauge here at the Lab. I live essentially in the same general vicinity against the mountains. We got about two and a half inches this last storm. Overall I would have to say we probably have in the neighborhood of 8 to 10 inches here at the Lab.

BISHOP: We got quite a bit just four blocks away. So I figure the drainage up here was fine.

BURIL: I wouldn't be surprised at all if we've had 18 inches of rain thus far.

LOWE: Maybe we can sample those dry wells.

BURIL: That's what we're hoping. We had seen low level at the aquifer back in -- when was that? '88 time frame, somewhere in there?

CUTLER: A little bit after that. Like Well 7 we had about three feet of water in it. We were sweating bullets. But this is the lowest it's ever been.

BISHOP: That was the same in the November?

CUTLER: No. I meant the November-October event is the lowest.

BURIL: Is the lowest. Not this one, but the next one.

GEBERT: Is that due to the amount of rainfall, or is it due to pumping or --

BURIL: I'd say last year we had a drier year than normal. So that was probably part of the reason. But the production wells apparently have been operating pretty steadily. So I think that's another aspect that's created it.

Then the last one, Figure 5-2, conditions of September, which really don't look that much different.

Skipping up to the next quarterly.

BISHOP: If I'm reading it right, you actually

dropped 10 feet in the same position between -- the general trend looks the same, but the magnitude.

BURIL: The actual water levels.

MELCHIOR: If you look at some of the wells, like MW-19, you lose almost 40 feet.

LOWE: You're kidding.

BURIL: No. He's right. The water table did sink, on an overall average, about 10 feet from the length --

BISHOP: Even though the trend -- I mean, the picture looks very similar. It's just a different magnitude.

BURIL: The entire thing has just sunk.

CUTLER: Right. They seem to be keeping the pumps on longer during the year now. You look at these long-term hydrographs, the pumps will be on and then off, then on and then off. Now it seems they're on, and off a very short time.

BISHOP: I just thought I heard something about they're doing some work on the surface water diversion upstream, which is one area that the City of Pasadena gets water. It's just up the Arroyo there. They have surface water and they take water out there and put it through a treatment plant.

BURIL: The treatment plant is literally just up

the hillside.

CUTLER: There's a chlorination plant right there.

BISHOP: I thought I read something that they were working on the ground this year. And that may be why the pumps are on longer, because they're not using that water right now.

BURIL: That's possible. I had not heard that, but that certainly makes sense.

BISHOP: I just maybe read in the paper or something.

CUTLER: It all seems to be driven by economics, too. If it's cheaper for them to pump it than to buy it from MWD, they'll do it. So maybe the rates of MWD influence.

BISHOP: And those rates have been climbing.

CUTLER: I don't know.

BURIL: Okay. Moving on to the second one. Again, this report, where these figures come from is currently in review and will be submitted as soon as we can get our review complete. It's going to be a little behind the schedule that we identified for you earlier. In fact, we may need to revisit the monitoring report submission schedule because we're finding that it's taking longer for us to get the

report generated than what we initially anticipated. So that may be something we'll have to take a look at in the future.

But take a look at these. The results for carbon tet are similar. But again, we're still seeing the concentrations out at wells 17 and 18. You can see again that we had a further depression of the water table. As indicated, some of these upper screens were not sampled because they had been dry.

MELCHIOR: I want to point out that we're going to start sampling in a couple weeks again. So we're anxious to see if those screens have come back.

BISHOP: It looks like 12, which was nondetect before, is now starting to --

BURIL: Detect.

BISHOP: -- pick up.

BURIL: That's correct.

CUTLER: No. 12 was detect before. Its box is over to the right a little.

BURIL: Oh, you're right. I'm sorry.

BISHOP: I'm sorry. Yeah.

CUTLER: We're going to rearrange this a little bit so it's a little easier.

BURIL: It's similar concentration. Not exact,

but similar.

BISHOP: Okay. Just missed that.

BURIL: I did too, Jon. I thought you were right.

CUTLER: We're going to move this around.

LOWE: Any thoughts about MW-7 in the two sampling events?

BURIL: You mean the almost doubling of the concentration there? Is that what you're looking at?

LOWE: Yes.

BURIL: We've seen that well fluctuate at that level for carbon tet like this for as long as we've been sampling it. Exactly what the mechanism is that causes that is still a mystery.

MELCHIOR: What's odd is if you look at the TCE numbers for MW-7 actually in October-November, they went down compared to August-September. So there's really no direct relationship. I mean, if you could say there was a direct relationship that would be one thing, but it's apparent they behave quite a bit differently.

BISHOP: TCE numbers are pretty close, though. 27 and 37 are --

BURIL: They're about the same number. But the

changes in the carbon tet and seeing them -- rather than TCE and carbon tet tracking each other as you would expect, they're doing this.

CUTLER: Typically, this 170 level is more typical. Every now and then it will jump down to this double digit, pop back up, pop back down.

LOWE: Does it seem to be correlated with water level, or not?

CUTLER: To be honest, I haven't really looked that closely at that specific well and that specific compound.

BURIL: We can take a look at that as we evaluate this data. Certainly that's a possibility.

BISHOP: It's really hard. The well data just goes up, does that. It has some sort of its own little --

BURIL: Some driver. I don't think anyone has really figured it out yet. I've compared it to a cutting edge of a double bucksaw, if you've ever seen those. The lumberjacks use them. They're just all over the place.

Here is the hydrograph here. You can see. Get it up here where you can all get a look at it. These are the historical loads we were seeing before. This was back in '94. Here is where we saw

highs when we didn't have the pumping influence.

And here we're off the scale.

CUTLER: That's not completely up to date. But that downward trend, it kept going.

BURIL: Okay. Flip over to the next page, 3-2 for October-November. You see that we're still seeing TCE in the same wells. Here, though, we've been unable to sample Well 16 because it went dry. We are still seeing it out in Well 18 and in Well 17.

Well 21, the first screen, which is typically where we saw TCE in the past, that screen had run dry. So we have no ability to see if we had similar concentrations as we've seen in the past with Well 10.

Then on the next one for the 1,2-DCA, we're seeing a couple more detects here, but for the most part it's pretty much the same as it was before that.

BISHOP: Actually, on this map that you've got for the DCA on 21 it says "nondetects," then it says "not sampled." Is that just a --

BURIL: That's to say screens 2 through 5 weren't detect for the samples that we took. But screen 1 couldn't be sampled. So there's only four

samples out of that as opposed to five.

BISHOP: And the same on the TCE? It just didn't get labeled that way?

BURIL: Yes.

BISHOP: I just want to make sure they were the same.

CUTLER: On TCE there might be something below an MCL. On 21 there's a chance that happened. Something below an MCL on a lower screen. So that's probably why it said no detect. There was not a no detect.

BISHOP: Right. Got you.

CUTLER: If this is confusing, we can change it.

BURIL: And then flipping to the next one, Figure 3-4, this again is all the metals that we found. Is that correct, Mark?

CUTLER: Yes.

BURIL: You can see a few low hits on lead that we didn't see before, very low hits. Same wells show up for arsenic as did before.

CUTLER: And no hex chrome in Well 10.

BURIL: And again, based on my read of this, I didn't find anything that was above an MCL on the metals.

CUTLER: We did not sample for aluminum this

second time because the first round -- we added that in. Penny wanted aluminum for everything. Nothing was above any type of a screening level. So we did our one-time --

BURIL: So we did our analyses, found no indication to continue, so we stopped.

NIOU: Mark, may I ask, what's the original arsenic value?

CUTLER: The background?

NIOU: Yes. Regional background.

CUTLER: I don't know. If you just look at the site, I'd say nondetect. We have a couple deep screens that always have arsenic that I think is just part of the sediments, just that is natural for that depth at that location. But other than that, it's nondetect on site.

BURIL: When I look at that, I look to the upper screens of the multi-port wells and also the shallower screened standpipe wells. And if the arsenic were something that was associated with JPL operations and it made its way into the environment through the years, I would expect to see it at other locations like we do for the volatiles, like carbon tet and so forth. We see it in the upper screens and lower screens. But finding it in the very

bottom screen only of two wells tends to make me think that's something that is probably naturally occurring, if it isn't something that's coming from off site, which I have my severe doubts about as well.

So I really think we're dealing with something that would be a natural part of the sediment structure at that depth. And it's not uncommon, I would think, in Southern California to find arsenic-laden soil. So we may just be tapped into a strata that has it.

The next page, 5-1, shows a very similar kind of layout again in terms of the configuration of the groundwater table. But if you look at what we had in September at a couple of these wells, you see that the dropping off apparently has slowed down some. About 5 to 7 feet, it looks like, approximately, changes.

Some of them --

BISHOP: Went up a little bit.

BURIL: -- went up a little bit. Right. Well 1, for example, went up about a foot, a little over a foot.

So the plunge over the cliff appears to have slowed as far as the water tables are

concerned.

Then if you look at the next one, the water table appears to be recovering a little bit. It went up by a couple of feet in a few locations.

Now, Mark, for the multi-port wells, these are for the first screen only. Is that right?

CUTLER: Yes.

BURIL: That's why you see in some of these there's an asterisk where it says water level is below screen interval?

CUTLER: Right.

BURIL: That's because it's below the first screen interval. There's no way to measure it.

CUTLER: We felt the second screen was just a little bit too deep to be representative of the water table.

BISHOP: Yes.

BURIL: Okay. Well, that's everything we've got up to date.

BISHOP: And you said that these come from the first --

BURIL: First and second monitoring reports. Correct. The first one, as you get back to your offices today or tomorrow, should be sitting there on your desk --

BISHOP: Right.

BURIL: -- if Federal Express works the way they're supposed to.

And the second one is in review here at JPL, and they'll be a little behind schedule, but we'll get that as rapidly as we can. It should be, hopefully, no more than two or three weeks, something like that.

LOWE: So this September-November data has been validated.

BURIL: Well, recall that the way we agreed to do the validation is, we agreed to do the validation after the report was submitted to you folks so that you got the information as rapidly as we could give it to you.

LOWE: Okay.

BURIL: So no, these have not been validated yet.

CUTLER: I don't believe all of the data was going to be validated.

BURIL: No. It was only 10 percent.

CUTLER: 10 percent.

BURIL: Okay. So any comments or questions regarding --

BISHOP: I think we should put it essentially on

the schedule for the next RPM meeting so we can look at the actual quarterly report.

BURIL: The actual reports. That's fine.

BISHOP: And have a chance to digest it, if that's okay with you guys.

BURIL: Sure. I have no problem with that.

Given what we've seen here today and without having had an opportunity to digest it, I guess there's a discussion that we wanted to hold on the interim ROD and what we might anticipate as a need to move to an interim ROD in Operable Unit 3.

Debbie, was that you that came up with that idea?

LOWE: Yes. I brought some guidance documents down. I think you probably got this one by fax, Chuck.

BURIL: Yes. We have it right here.

LOWE: Yes. I don't know that I brought enough copies for everybody.

BURIL: I have four here, if you have just a couple extra.

LOWE: I have four extras.

BURIL: That should just about cover us. Let me keep one and I'll pass three this way. If Foster Wheeler can share one, that will help.

LOWE: Just to remind everybody, the reason why this originally came up is because Jon and I were talking about how, in the off-base groundwater we're really not drilling any new wells or collecting any new data other than quarterly monitoring and is there a way to speed up that ROD in order to show progress to our management, to the public, everybody.

And Chuck had asked me to bring down some guidance talking about why you do an interim ROD, how it gets structured, what the process is. And that starts about on the third or fourth page. The reason why you do an interim ROD is laid out in the first paragraph, "to take a quick action to protect human health in the environment from an imminent threat in the short term while a final remedial solution is being developed."

So it seems like we could take a look at the off-base situation and decide, you know, are the wellhead treatments that are there now sufficient, is there anything else that we need to do in the short term, and then sign that ROD, and then at a later date when we look comprehensively at the relationship between on base and off base, that we could develop the final remedial action for the

groundwater together.

BURIL: Okay. Let me ask you this: Recognizing you haven't had a chance, really, to digest what's been shown to you in these maps, would you anticipate that with the concentrations that we're seeing in the two wells, 17 and 18, that we may be in a position of needing to do more work out there prior to the development of an interim ROD?

This is new data, obviously, and something that you haven't had a chance to review. I appreciate that very much. But the thing that strikes me is that if we go to an interim ROD, I think we're probably in a position of doing exactly as you said, taking the existing groundwater treatment systems, saying, hopefully, that they are adequate and that we are in a monitor and no further action until such time as we deem that there's something to do here on site versus off, and how that works.

My first thought was that if we do that, then we're saying that even with these levels of detection that we're seeing in these wells, that our plume off site is adequately characterized. I have no problem saying that. I think that's a reasonable conclusion based on what we're seeing in Well 20.

But I raise it only from the standpoint of wanting to be sure that you folks recognize it. That would be the tacit decision that we've made by issuing an interim ROD, that there is no need for further characterization.

BISHOP: Yes. That's, I guess, implicit in the decision.

The issue that I see, and we're going to have to look at these numbers more before we get --

BURIL: Sure. Absolutely.

BISHOP: The City of Pasadena wells here have the treatment on them. And then as I understand, Lincoln Avenue 5 has treatment on it?

BURIL: Lincoln Avenue 5, I don't believe does. I think it's Lincoln Avenue 3 that actually has the treatment.

BISHOP: It's Lincoln Avenue 3 that has the treatment.

BURIL: Right.

ROBLES: We're in negotiations.

BURIL: And we're in negotiations to treat the other wells.

BISHOP: Because just as a first look at it, Lincoln Avenue 5 seems to be an impossible path from 17 to 18.

BURIL: Agreed.

BISHOP: That would be the area that we would, if we wanted to do an interim ROD, at least at first look, that we would want to look at to protect that well in some way. I don't have any recent data from that well so I don't know what the -- how it compares.

BURIL: I haven't seen anything recently either. So I don't have any more than what's been brought to you thus far.

BISHOP: I think the last meeting we looked at some of that data.

MELCHIOR: Chuck, can I ask a point of clarification, more than anything else.

Debbie, you were talking earlier about controls in terms of a wellhead treatment using existing systems. Just out of curiosity, would you consider that a no new action in the terms of this guidance document, or is that actually considered an institutional control, the wellhead treatment concept?

LOWE: I think it's confusing because the wellhead treatments that have been put on there haven't been covered by any CERCLA action. I don't think there was a removal action or anything like

that that covered it.

So to me it would be, you know, blessing those actions that have already been taken and selecting those as the remedy, although, you know, it wouldn't be any new capital cost to keep them going. You would probably look at the O & M cost for those as part of your ROD.

MELCHIOR: I understand. So it wouldn't qualify as what's considered here a no action decision?

LOWE: No.

MELCHIOR: I was reading the first paragraph of your no action decision.

BISHOP: In San Gabriel we came to essentially that same conclusion, that existing wellhead treatments have to be considered, at least the cost of them, as a part of your evaluation of alternatives. It isn't, I guess, fair or justified to say since it was put on not as part of the CERCLA action, the cost that's being paid for that is ignored because essentially they may be providing the remedy and that cost, then is that the most inexpensive way to address it? Is that the most efficient way? It may not be or it may be. Sometimes it is and sometimes it isn't. It should just be looked at in the final --

MELCHIOR: Final analysis.

BISHOP: Yes. Alternatives.

BURIL: Given that we have two systems in place, with a third one under negotiation and so forth, and not having done anything more than peruse this, what would be the steps that you would anticipate we would need to go through?

We've talked a little bit about the ROD aspect, but I guess one of the things that strikes me is that having had the systems already put into place that virtually had no feasibility studies done on them at all, if we would be required in some way to pursue a feasibility evaluation of these things and then a ROD? Or what would be the process approach?

MELCHIOR: Actually, there was a feasibility study done on the City of Pasadena wells.

BURIL: You're thinking of the Montgomery study?

MELCHIOR: The Montgomery study was a feasibility study. So even though JPL didn't do that directly, that was a feasibility study on the alternatives and the selection of the treatment technology.

BURIL: I guess it's a question of feasibility for what.

MELCHIOR: Right.

LOWE: I think we need to back up and think about what would be the purpose for doing this interim ROD.

BURIL: Right.

LOWE: If you look at the guidance, it says you're focusing on one specific action or one specific purpose while you think about the overall cleanup strategy that you need in the future. And I think in this case what we would want to be able to say the purpose of this ROD is, is that we've looked at the contamination from JPL and where it's gone off base and we've evaluated all the potential receptors and determined that these actions are necessary to protect human health.

So you've looked at the Los Flores wells and said we know our contamination doesn't go out that far. We've looked up here and we know our contamination didn't go out that far.

In terms of the wellhead treatments that you've already put in place, I think the only options you would look at are is it necessary to continue this action or can we start bypassing the treatment system. You would only look at those two options.

BURIL: I see.

ROBLES: If we do an interim ROD, it needs to go out to public comment. Right?

LOWE: Yes.

ROBLES: It will need to go to Lincoln Avenue.

LOWE: They're part of the public.

ROBLES: And if they don't approve it?

LOWE: The public has the opportunity to input into the agencies making the remedy selection, and they don't have the ability to approve or disapprove. They comment, and that's one of the things that we consider as part of the nine criteria in remedy selection.

BURIL: Now, an interesting piece of this, and maybe this is why an interim ROD is something that may or may not be appropriate, but certainly I don't think we're in a position of being able to do a final ROD, and that is blending number 5 on the agenda in here a little bit, and that is the conjunctive use program.

Recognizing that this particular program is something that is likely to be in place about the time that we would be ready to go to final ROD based on the schedule that they're telling us now, they'd like to have their entire program in place and

operational in about two years, which, in essence, is when we're going to be ready to go to remedial construction.

I guess I'm a little concerned about what avenues, given the fact that we've gone through this interim ROD, assuming we do, and we've said, okay, this is fine, no problem. What impact would that have on the conjunctive use program, if any, and what could we anticipate as being the impact it would have on final ROD at the point in time that that comes up?

I'm trying to look two years ahead here.

BISHOP: When you say "impact," are you talking about what impact on the hydrogeology, or what impact on the economics or the political, or all of them kind of put together?

BURIL: All of them kind of shoved together. I don't think you can divorce one from the other very easily.

BISHOP: I think you have to look somewhat back and say, okay, what are the effects that's going to happen to the groundwater. That's one area you need to look at because that may make a difference in what you choose for remedy selection.

BURIL: Right.

BISHOP: Then what impact does it have on the financial obligations that NASA has and the City of Pasadena would then take on and the conjunctive use would take on.

Because they may be changing the -- or will be changing the groundwater flow patterns --

BURIL: Dramatically.

BISHOP: -- in the basin. And they may be changing them beneficially or detrimentally to the contamination just in that isolated look. So you have to look at kind of the groundwater first and then --

BURIL: Actually, you've kind of laid out the series of concerns that I think we may be facing here, and that is, one, we have a groundwater issue, obviously, as the hydrogeology begins to change in response to the implementation of this program, and what that means to our remedial efforts either here on site or maybe even off site in terms of capacity of the plants or type of plants, and so forth.

The second part of this, though, that strikes me is one that's more immediate, and that is that if we identify that they, indeed, will have an impact not only on these existing systems but possibly on a system that would be constructed two,

three years from now, that perhaps there is a need to intervene in some fashion to be sure that one goal does not adversely impact another goal.

You see what I mean? If the goal of implementing this program does not create such a concern --

BISHOP: Right. I'm not sure -- I mean --

BURIL: I don't know how this works. That's why I'm raising the question.

BISHOP: You have to think very carefully about that. This is the way I'm reading what you're saying, is that the conjunctive use may be detrimentally impacting your ability to clean up this plume. Well, on the other side, the Raymond Basin could turn around and say "Your pollution has detrimentally impacted the way we can use conjunctive use and if you're going to try and stop this program, we're going to turn around and sue you for natural resource determination."

BURIL: Right.

BISHOP: I think what you want to do is try and keep with them to work this together.

BURIL: Obviously.

BISHOP: It would be nice to say "You guys, just stop until we're done."

BURIL: That's not going to happen.

BISHOP: But that's --

BURIL: See, what I'm trying to understand is, one, is there a recognition of a higher goal in terms of remediation, or has this ever been an issue where there's a water resource management program being implemented in an area that overlaps into a remediation?

BISHOP: Every time.

BURIL: I assumed that was true.

So one of the things I'm wondering is, is there a mechanism by which you identify the, quote, higher goal, or is there a higher goal?

BISHOP: There is a -- the water resource is the top goal.

BURIL: Okay.

BISHOP: That's the purpose, is to protect the water resource.

BURIL: Okay.

BISHOP: Now, how you define that water resource is where you come into difficulty, because to the Raymond Basin, the resource is both the water that's in there and the water they can put in.

BURIL: So it's a management issue as well as an existing resource issue.

BISHOP: Right. Exactly. Because it's an issue of -- if you've detrimentally affected the basin so it can no longer be used for a conjunctive use project, then in essence you've reduced the Raymond Basin's ability to manage their resource. And that's a very --

BURIL: That's a big deal.

BISHOP: Yes. And it's a very difficult deal to issue because it's not a past thing that you can say it was worth this much and now it's only worth this much. It's a possible future benefit both to the Raymond Basin and to the State of California.

ROBLES: But if the Raymond Basin project for putting in water, and they know that the site is contaminated and they're putting in water and then they come back to us and say, "Well, you contaminated our resources that we injected into this aquifer." That I have a problem with, knowing that and then coming back to us.

BISHOP: Right. That's what I was trying to say earlier, is that the other option they have is that they could just calculate what the amount of money they could have saved by using this as a conjunctive use and turning around and asking NASA to pay that because they can't use it for conjunctive use

because of this contamination. That's why I think you want to try and get together to make it a joint effort.

BURIL: Absolutely.

BISHOP: Which is what we've done for Baldwin Park. They have a conjunctive use effort which combines the conjunctive use with the CERCLA remedy for clean-up. They pump more water that way for treatment, and there's also the benefit of the income of the conjunctive use to offset the cost of the treatment portion.

Because what they really want to do is pump a lot of water. What you need to do is pump water in certain areas. Maybe what you can do is combine those two needs into one so it's done in a way that helps the contamination.

BURIL: Raymond Basin has already expressed an interest in talking to us. In fact, as noted on the agenda, we do have a meeting set regarding conjunctive use.

I guess what we're hearing is that we need to work together with Raymond Basin on this thing very, very carefully. So this meeting is probably apropos.

We've kind of fallen into a little bit of

number 5. Let me pass out another piece of information that came out just a few days ago.

MELCHIOR: Chuck, can I borrow you for about five seconds to ask you a question?

BURIL: Sure.

MELCHIOR: Maybe something you may want to ask.

LOWE: Do we want to just --

BURIL: Do you want to take a break for about 10 minutes and reconvene?

BISHOP: I'll go grab a cup of coffee.

BURIL: Sure. Okay. We'll take a break.

(A recess was taken from
10:36 A.M. to 10:55 A.m.)

BURIL: What I passed out here for everyone is a copy of a letter that I received as I stepped in the door from Christmas vacation. This is from Raymond Basin Management Board, as you can see, and it expresses concern about the information that they've received thus far, and also somewhat about the conjunctive use program.

Now, I called my principal contact. I know Bill Bangham. And Ron Palmer, the fellow who signed this, is a gentleman who works for Valley Service Company. He works right here over on Hampton Road. He's my principal contact with

Raymond Basin. And calling him and saying "Hey, what exactly are you asking for, because we want to work with you."

What he stated was that, one, they haven't seen the older data, the RIFS data that we have from back in '94 and that's something that hasn't been published in the reports yet. But he was also concerned by the fact that originally the schedule said that we would be coming to remediation about this point in time and we're still in a characterization phase as a result of data that we've had.

And so he was asking "Well, what can you tell us now?"

And what we've agreed to do is to meet with him on February 12th. This is the Executive Board of the Raymond Basin Management Board. It's a subset of the full board, basically. It's the directors of the various water companies, for the most part. And just basically give them a little dog and pony show about where we're at.

We've also agreed that as information is made available to repositories, we will provide that to them directly. So the first groundwater monitoring report that has been sent to you folks

and should be sitting in your desk is also being sent to them.

LOWE: Good.

BURIL: So we will use that as the basis for providing them information.

And I indicated to Ron that when we do meet that I would be sure that you folks knew about it and then also offer the opportunity that if you wanted to be participants in that meeting to answer questions from them to you directly, there was the opportunity for that as well.

LOWE: What time is the meeting?

BURIL: It has not been scheduled beyond the day, which is February 12th.

LOWE: Okay.

BURIL: Generally, I think they start at 9:00 or 9:30 is the typical full meeting.

ROBLES: It would be nice to be in force, all of us.

BURIL: I think all of us showing up could be very beneficial and certainly give them a better feeling for what's going on.

GEBERT: That is a State holiday, however.

BURIL: Oh, it is?

GEBERT: Yes. I don't know --

LOWE: It's a State holiday for you too?

GEBERT: Yes. For Jon it is. I don't know for Debbie.

ROBLES: What holiday is it?

BURIL: What is it?

GEBERT: Lincoln's birthday.

LOWE: It says Ash Wednesday on my calendar.

BURIL: Let's see here. I brought a calendar for '99.

BISHOP: That's not really a problem.

GEBERT: Not really for me either.

BISHOP: Of course, I don't keep track of the State holidays.

BURIL: You just work whatever you have to.

BISHOP: Until I walk up and the door is locked and I realize I made a mistake.

I think Monday is a holiday too.

MELCHIOR: It is.

BISHOP: This coming Monday.

LOWE: Martin Luther King?

BURIL: Yes. The 20th is.

On my calendar her it shows the 14th being Valentine's Day and the 17th being President's Day. So it must be a State holiday.

GEBERT: Yes. We have a few additional

holidays. But for me it's no problem.

BISHOP: It's not a problem.

BURIL: That's the day. I'll get back to you with a time as soon as it's made available to me.

What I was told basically is they were going to put us on the agenda. In large part, we will be the agenda. I asked that this be an information exchange kind of meeting rather than a dog and pony show, that we'll give them the information that we have available to us and can offer them and be prepared to answer questions, but in turn we'd like to hear more about this conjunctive use and the role that Raymond Basin is going to be playing in it and as much information as they can provide us about that.

ROBLES: Also, we need to ask them the role that they envision us to play.

BURIL: I think this is the beginning of that whole long partnership that we will ultimately have with Raymond Basin and the conjunctive use is to understand, first, what our individual concerns are and then I'll identify how we can resolve those mutually. So this is the first of many meetings, I'm sure.

Okay.

LOWE: Another thought is that we could also apply the interim ROD concept on site and really look at trying to do a quick and dirty hot spot groundwater treatment with a thought that if you can, you know, start to deal with your worst area of contamination here, that in two years when the conjunctive use project is going, the issues won't be quite as difficult.

BURIL: Yes. I can see that as our own opportunity to accelerate cleanup here.

I think that probably it's best for us to try understand a little bit more. Personally, I feel like I'm working in a vacuum when it comes to this conjunctive use thing.

Quite honestly, it makes me nervous as hell because I just don't know what it's going to do. If I can dump a 2,000-gallon system up here and find out they're going to be injecting at Lincoln Avenue 3 at 2,000 gallons a minute and suddenly I draw a nexus between the two because of the hydrogeology and I'm not cleaning up anything, then I've kind of wasted my money and time.

LOWE: But if that's not going to happen for two years, if you can get something in there like soon and start dealing with your hot spot area, it won't

be quite as severe of a problem.

BURIL: "Soon" in this particular organization is --

ROBLES: Two years.

BURIL: -- something of a geologic term. Two years would be soon. He's right. Two years would be soon just to get it through everything that we had to do.

Now, we can do things that are less intrusive, like vapor extraction. I don't think that would be as difficult to do. But a water treatment system, which could easily be the size and magnitude of the one across the Arroyo in order to affect a reasonable cone of depression in a cleanup area, is going to take some time.

LOWE: What about even some innovative technologies to try and do in situ treatment in the ground.

BURIL: For example?

LOWE: Aren't there systems that like -- you know, for shallow areas where you can pull up the water, then just let it fall back down and kind of try and aerate it a little bit?

BURIL: You're talking about in situ sparging, in essence.

LOWE: Yes.

MELCHIOR: Or the iron filings that they're using up at Dill Air Force Base.

CUTLER: That's tough at these depths because your area of influence may be 15 feet or so, or 20 feet. It's tough to get down that far. I mean, it's 200 feet to get to groundwater up there.

BISHOP: The big issue I've seen with it is that you really are dealing with the top 5 to 10 feet of the aquifer. If that's where your main problem is, then that's a great use. If you've got a significant column of groundwater, you don't get much benefit. You remove mass. That you do. But you don't get a lot of benefit in terms of any kind of knocking down of your contamination.

BURIL: There's no containment of it whatsoever.

BISHOP: No, not at all. It's not built at all to do that. It's just mass removal. Sometimes that's really helpful if your contamination is limited to a shallow portion.

BURIL: Floating product would be a great example.

BISHOP: Well, even VOCS that haven't, you know --

buril: Yeah.

BISHOP: -- because they don't sink all that quickly, especially if they're dissolved and not -- there's no pure product. If you've got -- I mean, that's I think a problem with this, is that we aren't sure if we've got contamination at depth because we've only got the shallow wells in that --

BURIL: Which is what we're going to be remedying with the wells we're going to be putting in.

An interim ROD would seem to be reasonable for source removal -- rather an interim remedial, not interim ROD but interim remedial action would be reasonable, and something that we said we would look at, and we fully intend to when we get the data of what we're dealing with.

Groundwater cleanup is one that, based on my understanding of our site, it's going to be a massive undertaking, and that massive level of effort is going to take a massive amount of money. That we don't have programmed in, and I don't believe NASA has the wherewithal to absorb a change of $3 or 4 million bucks, which would be my off the top guess of what we'd be talking about --

ROBLES: Minimum.

BURIL: -- to put something in.

I don't know. I don't think Goldin would appreciate it. That's the manager of the division.

ROBLES: We haven't seen the final budget yet from Congress, but it looks like it's going to be cut, which means it's going to have an impact on our environmental compliance funding.

BURIL: We don't anticipate a problem with our current scope of work at all, but additions to, significant additions, like a water treatment plant, could be a problem not only technically but from an administrative standpoint, too.

BISHOP: Another thing you might consider is discussions with the Raymond Basin Management District, because they may not have the same level of constraints on funding and procurement that you do to do something that would be of benefit for both of you. I think it's early to come into that decision, but sometimes a private party or a smaller bureaucracy has the ability to do something in a fast turn-around that is what we would call interim action or removal action, and that may be of benefit to both of you in the long term.

BURIL: That's worth at least opening discussion. We'll think about it, sure.

We talked about the conjunctive use

program overall last time, didn't we? You had kind of a feel for what it was all about?

BISHOP: Right. You gave us a --

BURIL: Those documents and stuff.

LOWE: Yes.

BURIL: I have extra copies if anyone needs them. I just wanted to be sure that you did have those and didn't have any problems with lack of information.

I think, really, we're coming down to a couple other things here that I'll just present to you here. There's one thing here that I want to pass out to everyone.

This is a copy of a letter that was given to us at the very end of December from Montgomery Labs. It's talking about the identification of unknown compounds and how they did it. So I'll just pass this out and you can have this as our document of what our lab has done in terms of compound identification.

Basically what it comes down to is they followed all the protocols that are in existence. If they say it's unknown, it's unknown only because none of the protocols that they're able to run can identify what's going on. And they're based in the

clip requirements and the various methodologies, and so forth.

Now, this is just provided for your information. I didn't plan to discuss this at all, unless maybe at our next meeting you might have a question.

I'll point out on the second page, the paragraph just below the bullets is kind of our laboratory's final word on how they deal with these things. I think the last sentence says it all. They feel it's not good scientific practice to deviate from published regulatory agency guidance for identification of unknowns. Basically what they did is followed all the guidance.

So information and for possible future discussion, if you feel it necessary.

BISHOP: Okay.

BURIL: It looks like we're down to the last part of this, and that is the partnering meeting, other than anything else.

Before we do that, is there anything else anyone wants to bring to the table to talk about before we start talking about the partnering meeting?

LOWE: I brought some guidance documents down

for your use.

BURIL: Okay. Great.

LOWE: I didn't bring enough copies for everybody, but what I have is Presumptive Remedy Guidance on Site Characterization and Technology Selection for CERCLA Sites with VOCs in Soils.

I also have a brand new copy of our Guidance on Presumptive Remedy Strategy for Contaminated Groundwater.

BURIL: I've heard that term before, but my memory fails me. What does "presumptive remedy" mean?

LOWE: It's essentially saying, you know, there's some situations where it's really obvious what kind of remedy you should be implementing. Do you have VOCs in soils? The most logical thing to do is to do SVE. If you have a landfill, the most logical thing to do is cap it. And with groundwater the most logical thing is to pump and treat it. So instead of the lead agency going out and researching all the potential ways of trying to solve it, if you would like to streamline your process, you can streamline your FS by following these guidances.

BURIL: Sounds like a good idea to me.

LOWE: I also brought these two, which I found

at the last minute and didn't make copies of. Presumptive Remedies; Policy and Guidance kind of explains what it is, and then Feasibility Study Requirements and Administrative Record Requirements when you do use presumptive remedies. So maybe we can either --

BURIL: Can Diane get copies of those for us?

ROBLES: Sure. How many copies do we need?

BURIL: Why don't we start with a couple, and then I can fan them out to everybody. We can send them to you, if that's all right, with the minutes.

GEBERT: I'm pretty sure we don't have these.

BISHOP: Of course not. They're October 1996.

GEBERT: I'm sure we don't.

BURIL: Hot off the press.

LOWE: So I have, I guess, a copy to you. Shall I give the other copy to Peter or Foster Wheeler?

BURIL: I'll make a copy for Peter, but I'd like them to have it.

I appreciate your bringing those.

That's good. We'll have to talk about that. I think we probably are in a site that we can pretty well figure out what we're going to do without a whole lot of discussion. We'll see.

Dan is looking at me like "Are you out of

your mind?"

Why don't we talk a little bit, then, about our meeting that we have tentatively scheduled in February. At that meeting I'll say that we aren't planning on taking notes and records, and so forth, like we are here. So I'm going to ask this discussion on the partnering be taken off the record and we can talk about whatever it is we want to talk about and how we want to set that meeting up and see if we can come to closure on what we want to talk about there and be sure we can make it all work.

(Discussion held outside the record from 11:14 A.M. to is 11:38 A.M.)

BURIL: Let's go back on the record, please.

We have action items here for this meeting that we established.

That was that we'll be putting the quarterly report and the groundwater results for the last two quarters on the agenda for the next meeting to discuss those and what impact they may have in our decisions regarding the project as a whole, including interim ROD.

We also have the Raymond Basin Management Board scheduled currently for February 12th, and all RPMs from the agencies are invited to attend and sit

in at the meeting.

And we'll also be distributing the copies of the prepublication of the office solid waste emergency response guidance presumptive response guidance stuff, which is the thick one here.

Is that all one document, that huge title?

NOVELLY: Yes.

BURIL: I wasn't sure if there was an "and" because of the second document or not.

So that came out of this meeting.

Out of the last meeting, I have copies of this. I'm going to try and take a look at the action items here. I admit to not having done this until now. I think we've got everything pretty well set.

We signed off on our RPM consensus statement, which is great.

LOWE: Have we looked to see that we're doing all the things that were in the consensus statement?

BURIL: Good question.

LOWE: I thought one of the things was that we were going to together and look at the PE samples and what should be in them.

BURIL: That's a good point.

LOWE: I don't think that's happened.

BURIL: No, that hasn't happened. You've raised an excellent point.

I'm not prepared to talk to it today. I don't think you guys are, are you?

LOWE: Can Foster Wheeler take a first crack at it, make a proposal and send it out to us?

MELCHIOR: Of what should be in the PE samples?

LOWE: Yes.

BURIL: Yes.

CUTLER: Yes, we could do that.

BURIL: I'll make that assignment officially.

MELCHIOR: I sent you some catalogs recently.

BURIL: You did, and I have those buried in my office somewhere. I just moved to a new office. I've got to unbury them. I'll find those.

I think maybe we should talk about what the proposal ought to have in it and then fire it out to these folks so we can be sure that's taken care of.

That's a good point, Debbie. Thank you.

We've talked about the conjunctive use, and we've talked about the interim ROD, which was Debbie's information here regarding interim ROD.

LOWE: How are we going to try and resolve that? Do you guys want to think about it and then --

BURIL: I think we're in a position of needing to just kind of pull back and think what the guidance has to offer, what that means to us, what steps we would have to take. There's other concerns, too, that may pop up. I don't know what they are right now. But there may be something in there that may be unpalatable to us. I don't know.

LOWE: So are we looking to rediscuss this at the next conference call or the next meeting?

BURIL: I think we could, at the minimum, give a status at the next conference call. But I think a full-blown discussion should be face to face at our next meeting.

LOWE: Okay.

BURIL: We're meeting today, which was no problem.

Now, I have something here about the City of Pasadena agreement, which I guess is something you had asked for, Debbie, as I recall.

LOWE: That's correct.

BURIL: I don't know what's occurred as a result of that.

ROBLES: We don't have that.

LOWE: This was actually a request I made to you quite a while ago, Peter, if I could get a copy of

either NASA's or JPL's agreement with the City of Pasadena. You had said that you would check with your attorneys to see if you could release that to me.

ROBLES: Yes. That's not a problem. I checked with the attorneys because basically it was JPL who signed it. But it's JPL's call.

BURIL: Oh, it is?

ROBLES: That's what Bill Barr was saying.

LOWE: So, Chuck, maybe you want to talk to your attorney.

BURIL: I will. Judy, please make a note of that. Talk to Yohalem about what we can do on this.

ROBLES: Because the bottom line was that this has been, is it our document or is it the contractor's document. I said "We're paying for it," but then they said "No. NASA is not a signatory," so it's not our document.

LOWE: Okay.

ROBLES: It shocked me. We paid. We signed it. No.

BURIL: Number 3 on that agenda.

BISHOP: That worked out well, Peter. You're paying for it. You had no signature approval on it. Nice job.

ROBLES: If I was here, it might be different, but I wasn't here. Before my time.

BURIL: That was everything out of the previous meeting. I think we've pretty well covered everything.

LOWE: Can we schedule our next conference call?

BURIL: Absolutely. I even brought a calendar.

NOVELLY: Approve the minutes.

BURIL: Thank you.

The formal approval of the minutes from the last meeting. Were there any changes, additions or corrections?

BISHOP: No.

BURIL: Then the meeting minutes stand approved as written.

Thank you, Judy.

All right. We're sitting here at January 16th. The first Thursday is the 6th, if we want to stick with that schedule. Is that agreeable to everybody?

GEBERT: I can't do it that day.

BURIL: The next Thursday after that is the 13th, but actually we'll be here together on the 12th for that Raymond Basin Management Board meeting.

MELCHIOR: Why don't you just have it a half hour --

BURIL: Just take a half hour face-to-face at that point in time? Is that something that's useful?

LOWE: That's possible. I'm not absolutely sure that I'll come down for that. I'm going to try.

BURIL: If not, then maybe a phone call that day sometime. Unfortunately, I don't have a time for that meeting yet. My guess is that it will probably start at 9:00 or 9:30, which is standard time, which means you're on an airplane at 7:00 if you want to get here. Right?

LOWE: Yes, unfortunately.

ROBLES: Unless you come down the night before.

LOWE: I have theater tickets for the night before.

BURIL: You don't want to mess with that.

MELCHIOR: Did you say the 12th is when you're going to have this --

BURIL: The 12th is the Raymond Basin conjunctive use meeting.

MELCHIOR: That thing probably wouldn't go much past noon, would it?

BURIL: It depends on the level of discussion we

end up in, but I would say you're right, off the top of my head. Why don't we say 2:00 o'clock on the 12th, assuming that we do not all meet together on that day. That will give people a chance to get back to their office or hang around here if you want. Either way.

And the next RPM meeting. Technically, we're required to meet once every three months. That would be March. The Ides of March.

MELCHIOR: We're in January now. It wouldn't be March. It would be April.

BURIL: April. Excuse me. There's too much pain associated with the 15th of March, so let's pick a different date.

BISHOP: 15th of April.

GEBERT: 15th of April is even more painful.

LOWE: It's going to be easier for me if I can try and tie some of these meetings together. I know one thought was to try and tie our partnering session to the conjunctive use meeting. But if we can't, is there any way we can tie the partnering meeting to the RPM meeting?

BURIL: The partnering meeting would, I guess, be pushed back into the April time frame if we did that.

LOWE: Or compromise and move them both into March.

ROBLES: I think March would be a time when we try to meet together with the partnering meeting to facilitate that.

BURIL: Let me do this. Before we establish the next RPM meeting time let me see what's available at the Athenaeum. If we can get it on the 13th of February, then that would be, I think, good for you at least at that point, would it not? To have the Raymond Basin meeting and then the partnering meeting the next day.

LOWE: Yes.

BURIL: Then we could schedule something in April for an RPM meeting.

LOWE: Okay.

BURIL: If not, then we'll try to merge partnering and RPM in the latter part of March.

LOWE: Can we do this. Can we look at March and can people say which dates absolutely wouldn't work so at least we have a starting point for your secretary?

BURIL: At this point right now I'm open.

ROBLES: The week of the 17th or the week of the 24th. The last two weeks in March. Any problem

there?

LOWE: The 26th is a problem for me.

MELCHIOR: How about the 25th?

LOWE: What I said is not that we're going to pick a date, but at least so when Laurann starts calling around.

ROBLES: So the 26th is not good for you.

LOWE: Yes.

MELCHIOR: Could we keep it either on a Tuesday, Wednesday or Thursday, please?

BURIL: He's flying from the east coast. He's got it even worse.

LOWE: If we're doing, you know, the partnering session on one day that you don't need to be there, we could put the RPM meeting on Thursday, the partnering on Friday, so you wouldn't be traveling on Friday.

BURIL: That's fine. Let me see what's available, but we'll shoot for either the partnering being on the 13th, if possible. If not, we'll leave it where we currently have it, and currently we have it on the 26th of February.

GEBERT: I wasn't aware there was any date.

BURIL: I just remembered that my secretary said that the best time right now was the 26th. So I'll

ask you to put that on your calendar. First of all, does that pose a major problem for anybody on February 26th?

LOWE: Not a major problem. I'll miss a conference call that I should be on but don't have to be on.

BURIL: So the 26th as an alternate date as it stands, but the preferred date that we have to check is the 13th.

Then if that doesn't work, if the 13th doesn't work, we'll look to move the partnering and RPM into March. So maybe the 26th date isn't really going to work regardless. We may just have to move that around. It doesn't sound like it will work.

LOWE: I think we should either go for 13th for partnering --

BURIL: Or sometime in March.

ROBLES: Or the last two weeks in March.

BURIL: Why don't we make a note of that and we'll get Laurann working on that. Too many meetings. Anything else we need to throw on the table before we adjourn?

I think we did a good job. Thank you all very much.

(The proceedings adjourned at 11:51 A.M.)